

3.2 Medical Requirements Overview

TABLE 3.2: MEDICAL REQUIREMENTS OVERVIEW

MEDB# and Title:	MEDB 1.10 Ophthalmology Examination
Sponsor:	Medical Operations
IPT:	Therapeutics and Clinical Care
Category:	Medical Requirements
References:	SSP 50260 ISS Medical Operations Requirements Document (MORD) SSP 50667 Medical Evaluations Documentation (MED) Volume B
Purpose/Objectives:	To assess the status of ophthalmic health and function pre- and postflight.
Measurement Parameters:	Visual acuity, tonometry, automated visual fields, dilated fundoscopic examination, extraocular muscle evaluation, pupil reflexes, biomicroscopy (slit lamp), survey.
Deliverables:	A pre- and postflight optometry report will be included in the CMIS
Flight Duration:	≥ 30 days
Number of Flights:	All long duration flights
Number and Type of Crew Members Required:	All ISS primary crewmembers, and backup crewmembers for preflight.
Other Flight Characteristics:	N/A

3.3 Preflight Training: None**3.4 Preflight Activities****TABLE 3.4: PREFLIGHT ACTIVITIES**

Preflight Activity	Description:	An Optometry examination will be conducted preflight by a specialist. The examination will include: L-90/45 days <ul style="list-style-type: none"> • Refraction • Best Corrected Visual Acuity • Tonometry • Automated Visual Fields • Dilated Fundoscopy • Contact Lens / Spectacle Storage Plan • Amsler Grid Testing 			
		Duration:	Schedule:	Flexibility:	Personnel Required:
	Schedule:	Optometry Examination: 60 min	L-90/45 days & as clinically indicated	N/A	Specialist and crewmember
Ground Support Requirements Hardware/Software	Preflight Hardware:		Preflight Software:	Test Location:	
	Optometry examination equipment		N/A	U.S.	
Testing Facilities	Minimum Room Dimensions:	Number of Electrical Outlets:	Temperature Requirements:	Special Lighting:	
	8' x 10'	2 (110V)	Ambient	Adjustable	
	Hot or Cold Running Water:	Privacy Requirements:	Vibration/Acoustic Isolation:	Other:	
	N/A	Private room free of distraction	N/A	N/A	

Constraints/Special Requirements:	<p>Results from the eye examination conducted during an annual physical may be used if within 90 days of MAT test date. Drugs used to dilate the pupils will cause increased sensitivity to bright light and blurred vision. The optometry exam should be scheduled after neurovestibular activities or other tests that require the use of the eyes. Constraints <u>following</u> the exam include:</p> <ul style="list-style-type: none"> • No piloting of aircraft for 24 hours after dilation • Driving may be done but with extra caution • Avoid operation of any heavy equipment • Avoid operation of anything that may require acute vision, such as Remote Arm operation training • Avoid bright light situations
Launch Delay Requirements:	N/A
Notes:	Retinal photography and corneal topography are performed if indicated.
Data Delivery	Data/Report to Designated Recipients (Nominal/Contingency):
	Preflight eye examination reports will be kept in the crewmember's medical file and electronic medical record. It will be distributed at the discretion of the Flight Surgeon.

3.5 In-Flight Activities: None

3.6 Postflight Activities**TABLE 3.6 POSTFLIGHT ACTIVITIES**

Postflight Activity	Description:	R+0/1 Examination, which includes ophthalmoscopic exam, conducted by flight surgeon R+3 days Optometry examination conducted postflight by a specialist. The examination will include: <ul style="list-style-type: none"> • Best Corrected Visual Acuity • Tonometry • Pupil Reflexes • Extraocular Muscle Assessment • Biomicroscopy (Slit Lamp) • Survey • Amsler Grid Testing 			
	Schedule:	Duration:	Schedule:	Flexibility:	Personnel Required:
		Eye Examination: 5 min Optometry Examination: 15 min	R+0/1 R+3 days, & as clinically indicated	N/A See notes	Flight Surgeon & CM Specialist & CM
Ground Support Requirements Hardware/Software	Postflight Hardware:		Postflight Software:		Test Location:
	Optometry examination equipment		N/A		U.S.
Testing Facilities	Minimum Room Dimensions:	Number of Electrical Outlets:	Temperature Requirements:		Special Lighting:
	8' x 10'	2 (110V)	Ambient		Adjustable
	Hot or Cold Running Water:	Privacy Requirements:	Vibration/Acoustic Isolation:		Other:
	N/A	Private room free of distraction	N/A		N/A

Constraints/Special Requirements:	Drugs used to dilate the pupils will cause increased sensitivity to bright light and blurred vision. The optometry exam should be scheduled after neurovestibular activities or other tests that require the use of the eyes. Constraints <u>following</u> the exam include: <ul style="list-style-type: none">• No piloting of aircraft for 24 hours after dilation• Driving may be done but with extra caution• Avoid operation of any heavy equipment• Avoid operation of anything that may require acute vision, such as Remote Arm operation training• Avoid bright light situations
Notes	If eye exam results are off- nominal, a follow up exam may be scheduled at any time at the discretion of the vision specialist/flight surgeon.
Data Delivery	Data/Report to Designated Recipients (Nominal/Contingency):
	Postflight eye examination reports will be kept in the crewmember's medical file and electronic medical record. It will be distributed at the discretion of the Flight Surgeon.

3.7 Summary Schedule**TABLE 3.7: SUMMARY SCHEDULE**

ACTIVITY	DURATION	SCHEDULE	FLEXIBILITY	PERSONNEL REQUIRED	CONSTRAINTS
Preflight Training: N/A					
Preflight Activity					
Optometry Examination <ul style="list-style-type: none"> • Refraction • Best Corrected Visual Acuity • Tonometry • Automated Visual Fields • Dilated Fundoscopy • Contact Lens / Spectacle Plan • Amsler Grid Testing 	60 min	L-90/45 days	N/A	Specialist & CM	Drugs used to dilate the pupils will cause increased sensitivity to bright light and blurred vision. The optometry exam should be scheduled after neurovestibular activities or other tests that require the use of the eyes. Constraints <u>following</u> the exam include: <ul style="list-style-type: none"> • No piloting of aircraft for 24 hours after dilation • Driving may be done but with extra caution • Avoid operation of any heavy equipment • Avoid operation of anything that may require acute vision, such as Remote Arm operation training • Avoid bright light situations.
In-Flight: N/A					
Wheels-Stop: N/A					

MEDB 1.10 Ophthalmology Examination

MEDB 1.10
SLSDCR-SMCCB-07-015-R2

ACTIVITY	DURATION	SCHEDULE	FLEXIBILITY	PERSONNEL REQUIRED	CONSTRAINTS
Postflight Activity					
Eye Examination, which includes ophthalmoscopic exam	5 min	R+0/1	N/A	Flight Surgeon & CM	
Optometry Examination: <ul style="list-style-type: none"> • Best corrected Visual Acuity • Tonometry • Pupil Reflexes • Extraocular Muscle Assessment • Biomicroscopy (Slit Lamp) • Survey • Amsler Grid Testing 	15 min.	R+3 days & As Clinically Indicated	If eye exam results are off-nominal, a follow up exam may be scheduled at any time at the discretion of the vision specialist/flight surgeon.	Specialist & CM	Drugs used to dilate the pupils will cause increased sensitivity to bright light and blurred vision. The ophthalmic exam should be scheduled after <i>neurovestibular activities</i> or other tests that require the use of the eyes. Constraints <u>following</u> the exam include: <ul style="list-style-type: none"> • No piloting of aircraft for 24 hours after dilation • Driving may be done but with extra caution • Avoid operation of any heavy equipment • Avoid operation of anything that may require acute vision, such as Remote Arm operation training • Avoid bright light situations.
Postflight Debrief: N/A					